

In the Claims

What is claimed is:

- Sub A1*
1. A decorative floor covering comprising:
a substrate; and
a radiation cured pigmented topcoat disposed on the substrate having a stain resistance of about less than 150 Delta E units.
 2. The decorative floor covering of claim 1, wherein the radiation cured pigmented topcoat has a gloss retention of at least about 80%.
 3. The decorative floor covering of claim 1, wherein the topcoat comprises a composition selected from the group consisting of an acrylated polyester, an acrylated polyurethane, and mixtures thereof.
 4. The decorative floor covering of claim 1, wherein the topcoat comprises a composition selected from the group consisting of an ultraviolet light curable, electron beam curable layer, and combination thereof.
 5. The decorative floor covering of claim 1, wherein the substrate includes a printed pattern.
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6. The decorative floor covering of claim 5, wherein the pigmented topcoat is in register with the printed pattern.

7. The decorative floor covering of claim 1, wherein the substrate has a textured surface selected from the group consisting of a mechanically embossed texture, chemically embossed texture, and a chemically and mechanically embossed texture.

8. The decorative floor covering of claim 7, wherein the topcoat is in register with the embossed texture.

9. The decorative floor covering of claim 7, wherein the embossed texture has raised surfaces and indentations, and the pigmented topcoat is disposed on the raised surfaces.

10. The decorative floor covering of claim 7, wherein the embossed texture has raised surfaces and indentations, and the pigmented topcoat is disposed in the indentations.

11. The decorative floor covering of claim 1, wherein the pigment topcoat comprises nacreous pigments.

12. A decorative floor covering comprising:

a substrate;

a radiation cured pigmented wear layer disposed on the substrate; and

a radiation cured topcoat disposed on and adjacent to the radiation cured pigmented wear layer, the topcoat layer having a stain resistance of less than about 150 Delta E units.

13. The decorative floor covering of claim 12, wherein the radiation cured topcoat has a gloss retention of at least about 80%.

14. The decorative floor covering of claim 12, wherein the topcoat and the wear layer comprise compositions selected from the group consisting of an acrylated polyester, acrylated polyurethane, and mixtures thereof.

15. The decorative floor covering of claim 12, wherein the topcoat and wear layer comprise compositions selected from the group consisting of an ultraviolet light curable, electron beam curable layer, and combination thereof.

16. The decorative floor covering of claim 12, wherein the substrate includes a printed pattern.

17. The decorative floor covering of claim 16, wherein the pigmented topcoat or wear layer is in register with the printed pattern.

18. The surface covering of claim 12, wherein the substrate has a textured surface selected from the group consisting of mechanically embossed texture, chemically embossed texture, and chemically embossed and mechanically embossed texture.

19. The floor covering of claim 18, wherein the topcoat or wear layer is in register with the embossed texture.

20. The floor covering of claim 18, wherein the embossed texture has raised surfaces and indentations, and the pigmented topcoat or wear layer is disposed on the raised surfaces.

21. The floor covering of claim 18, wherein the embossed texture has raised surfaces and indentations, and the pigmented topcoat or wear layer is disposed in the indentations.

22. The floor covering of claim 18, wherein the pigmented topcoat or wear layer comprises nacreous pigments.

23. The decorative floor covering of claim 1, wherein the substrate comprises:
a laminated film.

24. The decorative floor covering component of claim 23, further including a printed pattern disposed on the film opposite the pigmented topcoat.

25. The decorative floor covering component of claim 24, wherein the radiation cured pigmented topcoat is disposed in register with the printed pattern.

26. The surface covering of claim 12, wherein the substrate comprises a laminated film.

27. The floor covering component of claim 26, further including a printed pattern disposed on the film opposite the wear layer.

28. The floor covering component of claim 27, wherein the radiation cured pigmented wear layer is disposed in register with the printed pattern.

29. A method of manufacturing a decorative floor covering comprising the steps of:

providing a substrate,

applying a pigmented topcoat to the substrate; and

5 curing the pigmented topcoat wear layer by subjecting the layer to radiation to form a topcoat having a stain resistance of less than about 150 Delta E units.

30. The method of claim 29, wherein the pigmented topcoat is cured by exposing the layer to radiation selected from the group consisting of ultraviolet light, electron beam radiation, and both ultraviolet light and electron beam radiation.

31. The method of claim 29, further including printing a design on the substrate.

32. The method of claim 31, wherein the pigmented topcoat is applied in register with the design printed upon the substrate.

33. The method of claim 29, wherein the substrate has an embossed surface formed by an embossing process selected from the group consisting of mechanical embossing, chemical embossing, and chemical and mechanical embossing.

34. The method of claim 33, wherein the pigmented topcoat is in register with the embossed surface.

35. The method of claim 33, wherein the embossed texture has raised surfaces and indentations, and the method further includes applying the pigmented topcoat on the raised surfaces of the substrate.

36. The method of claim 33, wherein the embossed surface has raised surfaces and indentations, and the method further includes applying the pigmented topcoat to reside in the indentations.

37. The method of claim 29, wherein the pigmented topcoat comprises nacreous pigments.

38. A method for manufacturing a floor covering component comprising;
providing a substrate;
applying a pigmented wear layer to the substrate;
optionally partially curing the pigmented wear layer by radiation;
5 applying a topcoat over the pigmented wear layer to form a wear layer/topcoat composite and;
curing the wear layer/topcoat composite by subjecting the wear layer/topcoat composite to radiation to form a wear layer/topcoat composite having a stain resistance of less than about 150 Delta E units.

39. The method of claim 38, wherein the pigmented wear layer and topcoat are cured by exposing the layers to radiation selected from the group consisting of ultraviolet light, electron beam radiation, and both ultraviolet light and electron beam radiation.

40. The method of claim 39, further including printing a pattern on the substrate.

41. The method of claim 40, wherein the pigmented wear layer is applied in register with the pattern printed upon the substrate.

42. The method of claim 38, wherein the substrate has an embossed surface formed by an embossing process selected from the group consisting of mechanical embossing, chemical embossing, and chemical and mechanical embossing.

43. The method of claim 42, wherein the pigmented wear layer is in register with the embossed surface.

44. The method of claim 42, wherein the embossed surface has raised surfaces and indentations, and the method further includes applying the pigmented wear layer on the raised surfaces of the substrate.

45. The method of claim 42, wherein the embossed surface has raised surfaces and indentations, and the method further including applying the pigmented wear layer to reside in the indentations.

46. The method of claim 38, wherein the topcoat comprises nacreous pigment.

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47. The method of claim 38, wherein the topcoat is pigmented.
48. A method of claim 29, wherein a film is laminated to the substrate before applying the pigmented topcoat.
49. A method of claim 38, wherein a film is laminated to the substrate before applying the pigmented wear layer.
50. The method of claim 48, wherein the film comprises a printed pattern.
51. The method of claim 49, wherein the film comprises a printed pattern.
52. The method of claim 50, wherein the printed pattern is opposite the pigmented topcoat.
53. The method of claim 51, wherein the printed pattern is opposite the pigmented wear layer.
54. The method of claim 52, wherein the pigmented topcoat is printed in register with the printed pattern.
55. The method of claim 53, wherein the pigmented wear layer is printed in register with the printed pattern.

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